AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (canceled).

2. (previously presented): A multibeam exposure head comprising:

a multibeam light source which exposes a recording material by main scanning,

said multibeam light source having a first multiple beam forming light source in which a plurality of beam emitting ports are arranged parallel to each other while being spaced apart from each other by a predetermined distance, and a second multiple beam forming light source in which a plurality of beam emitting ports are arranged parallel to each other being spaced apart from each other by said predetermined distance,

wherein said plurality of beam emitting ports in said second multiple beam forming light source are placed parallel to the parallel arrangement direction of the beam emitting ports in said first multiple beam forming light source while being spaced apart by a predetermined distance from the same, and the position of the beam emitting port at one end of said second multiple beam forming light source being shifted in the parallel direction relative to the position of the beam emitting port at the corresponding end of said first multiple beam forming light source; and

a tilt angle changing unit which makes, by rotating said multibeam light source, a change in exposure condition from a first exposure condition in which each of first multiple beams emitted from said first multiple beam forming light source and each of second multiple beams emitted from said second multiple beam forming light source are alternatively arranged at a first

equal interval in a subscanning direction perpendicular to the direction of main scanning on a recording material, to a second exposure condition in which each of the first multiple beams and each of the second multiple beams are alternatively arranged at a second equal interval in the subscanning direction.

3. (previously presented): The multibeam exposure head according to claim 2, further comprising an optical system in an optical path between said multibeam light source and the recording material, from a first beam pitch formed on the recording material through said optical system by each of the first multiple beams and the second multiple beams alternatively arranged at first equal intervals in the subscanning direction under the first exposure condition, said multibeam light source being rotated by using said tilt angle changing unit to form a desired second beam pitch on the recording material through said optical system by each of the first multiple beams and the second multiple beams alternatively arranged at second equal intervals in the subscanning direction under the second exposure condition.

4. (currently amended): The multibeam exposure head according to claim 2, wherein if the arrangement distance of said beam emitting ports is D_f; said first beam pitch is P; said second beam pitch is Q; ~~and~~ imaging magnification of an optical system for said multibeam light source is M;~~,~~ θ_a is a tilt angle of said beam emitting ports; Φ_1 is a position of said beam emitting ports; $\Delta\theta$ is an angle of rotation for changing a tilt angle; and L is a length of a side of a right triangle formed by a center point of a beam emitting port and

if a distance by which said first multiple beam forming light source and said second multiple beam forming light source are spaced apart from each other by a predetermined distance is W_f, then W_f obtained by the following equation (1) is set:

$$W_f = L \cdot \cos(\theta_a + \Phi_1)/M \quad (1)$$

where $L = (((2 \cdot n-1) \cdot Q + P \cdot \cos(\Delta\theta))/\sin(\Delta\theta))^2 + P^2)^{1/2}$,

$\theta_a = \cos^{-1}(2 \cdot P/(D_f \cdot M))$,

$\Phi_1 = \sin^{-1}(P/((((2 \cdot n-1) \cdot Q + P \cdot \cos(\Delta\theta))/\sin(\Delta\theta))^2 + P^2)^{1/2})$,

$\Delta\theta = \cos^{-1}(2 \cdot Q/(D_f \cdot M)) - \cos^{-1}(2 \cdot P/(D_f \cdot M))$, and

n is a natural number.

5. (previously presented): The multibeam exposure head according to claim 4, wherein if a width by which the position of the beam emitting port of said second multiple beam forming light source is shifted in the parallel arrangement direction relative to the position of the beam emitting port of said first multiple beam forming light source is Af, then Af obtained by the following equation (2) is set:

$$Af = (Wf \ddot{y} M \ddot{y} \sin(\ddot{y}a) + P)/(\cos(\ddot{y}a) \ddot{y} M) \quad (2)$$

6. (previously presented): The multibeam exposure head according to claim 3, wherein said optical system has a lens which finely adjusts imaging magnification of said optical system, said lens being provided in an optical path of the first multiple beams and the second multiple beams.

7. (previously presented): The multibeam exposure head according to claim 2, wherein said multibeam light source has an optical fiber array.

8. (previously presented): A multibeam exposure apparatus comprising:

a multibeam exposure head including a multibeam light source which exposes a recording material by main scanning, said multibeam light source having a first multiple beam forming light source in which a plurality of beam emitting ports are arranged parallel to each

other while being spaced apart from each other by a predetermined distance, and a second multiple beam forming light source in which a plurality of beam emitting ports are arranged parallel to each other being spaced apart from each other by said predetermined distance, wherein said plurality of beam emitting ports in said second multiple beam forming light source are placed parallel to the parallel arrangement direction of the beam emitting ports in said first multiple beam forming light source while being spaced apart by a predetermined distance from the same, and the position of the beam emitting port at one end of said second multiple beam forming light source is shifted in the parallel direction relative to the position of the beam emitting port at the corresponding end of said first multiple beam forming light source;

a tilt angle changing unit, wherein said tilt angle changing unit rotates said multibeam light source to change an exposure condition from a first exposure condition to a second exposure condition during a subscan of a width of an area of a recording material; and

an outer drum capable of performing main scanning on the recording material by having the recording material fitted and rotated around its outer cylindrical surface.

9. (previously presented): The multibeam exposure head according to claim 3, further comprising a collimator lens and an imaging lens for reducing multiple beams at an image forming point.

10. (previously presented): The multibeam exposure head according to claim 2, wherein said tilt angle changing unit comprises a rotary unit and a base unit.

11. (currently amended): The multibeam exposure head according to claim ~~11~~10, wherein said tilt angle changing unit further comprises a first member, a second member and a projecting member,

wherein said first member, said second member are located between the rotary unit and base unit, and

wherein said first member and said second member limit a tilt angle point by a predetermined range by limiting the movement of the projecting member fixed to the rotary unit.

12. (previously presented): The multibeam exposure head according to claim 2, wherein said tilt angle changing unit and an optical system are fixed to a movable table.

13. (previously presented): A multibeam exposure head comprising:

a multibeam light source which exposes a recording material by main scanning,

said multibeam light source having a first multiple beam forming light source in which a plurality of beam emitting ports are arranged parallel to each other while being spaced apart from each other by a predetermined distance, and a second multiple beam forming light source in which a plurality of beam emitting ports are arranged parallel to each other being spaced apart from each other by said predetermined distance,

wherein said plurality of beam emitting ports in said second multiple beam forming light source are placed parallel to the parallel arrangement direction of the beam emitting ports in said first multiple beam forming light source while being spaced apart by a predetermined distance from the same, and the position of the beam emitting port at one end of said second multiple beam forming light source being shifted in the parallel direction relative to the position of the beam emitting port at the corresponding end of said first multiple beam forming light source; and

wherein said second multiple beam forming light source is shifted in the parallel direction relative to the position of the beam emitting port at the corresponding end of said first multiple beam forming light source by a distance such that an end most beam source of the first multiple

beam forming light source and an end most beam source of the second multiple beam forming light source do not overlap each other.

14. (currently amended): The multibeam exposure head according to claim 2, wherein said tilt angle change unit makes, by rotating said multibeam light source, said change in exposure condition from said first exposure condition to said second exposure condition ~~during a subscan of a width of an area of a recording material~~in the subscanning direction.

15. (new): The multibeam exposure head according to claim 2, wherein said multibeam light source comprises at most two beam forming light sources, wherein each beam forming light source comprises a plurality of beam emitting ports.

16. (new): The multibeam exposure head according to claim 8, wherein each light source of the first multiple beam forming light source and the second multiple beam forming light source is arranged alternatively in a subscanning direction at a predetermined interval.